



UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/044,030	03/19/98	UEDA	A 980400

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EXAMINER
ATKINSON, C

ART UNIT	PAPER NUMBER
3743	17

DATE MAILED: 08/09/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/044,030

Applicant(s)

Ueda et al.

Examiner

Atkinson

Group Art Unit

3743

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 11/10/99
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-5 and 7 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-5 and 7 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☒ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

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Response to Amendment

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claims 6 and 8-12 have been cancelled.

Claims 1-5 and 7 are pending.

Specification

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of 37 CFR 1.71(a)-(c):

- (a) The specification must include a written description of the invention or discovery and of the manner and process of making and using the same, and is required to be in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which the invention or discovery appertains, or with which it is most nearly connected, to make and use the same.
- (b) The specification must set forth the precise invention for which a patent is solicited, in such manner as to distinguish it from other inventions and from what is old. It must describe completely a specific embodiment of the process, machine, manufacture, composition of matter or improvement invented, and must explain the mode of operation or principle whenever applicable. The best mode contemplated by the inventor of carrying out his invention must be set forth.
- (c) In the case of an improvement, the specification must particularly point out the part or parts of the process, machine, manufacture, or composition of matter to which the improvement relates, and the description should be confined to the specific improvement and to such parts as necessarily cooperate with it or as may be necessary to a complete

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understanding or description of it.

The specification is objected to under 37 CFR 1.71 because the originally filed specification fails to disclose how the claimed heat pipe is both bonded to the heat receiving plate and fixed to an element which generates heat, "said heat receiving plate having a size substantially equal to a size of said heat radiating plates", and the device of the combination of claims 1 and 5.

Claim Rejections - 35 USC § 112

Claims 1-5 and 7 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Regarding claim 1, the originally filed specification fails to disclose how the claimed heat pipe is both bonded to the heat receiving plate and fixed to an element which generates heat, "said heat receiving plate having a size substantially equal to a size of said heat radiating plates", and the device of the combination of claims 1 and 5.

Claims 3-5 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 3, the recitation "the heat radiator" lacks antecedence. Regarding claim 4, the recitation "the heat receiver" lacks antecedence. Regarding claim 5, the recitations "a fastener" and "an element" are indefinite since "a fastener" and "an element" have previously been recited and it is unclear if applicant is claiming an additional fastener and element

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or if applicant failed to provide proper antecedence. Also in claim 5, the recitation "said heat receiver" lacks antecedence. Regarding claim 7, the recitation "said connector" lacks antecedence and the entire claim is indefinite and indeterminate in scope since claim 7 depends on a cancelled claim. The remaining claim is included due to dependency.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103.

Claims 1-5 are rejected under 35 U.S.C. § 103 as being unpatentable over Tajima in view of Sugata.

In Tajima, it would have been an obvious matter of design choice to have the heat

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receiving plate having a size substantially equal to a size of the heat radiating plates, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

The patent of Tajima in Figures 1, 4 and 5 discloses the claimed invention with the exception of the ends being closed. Figure 5 alternatively teaches that it is known to having a fastener (15) attaching the heat generating element (13) to the heat receiving plate (11).

The document of Sugata in Figures 1-4 discloses that it is known to have a U-shaped profile heat pipe (1) having closed ends for the purpose of cooling a heat generating device (52). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Tajima, a U-shaped profile heat pipe having closed ends for the purpose of cooling a heat generating device as disclosed in Sugata. The remaining limitations are considered to be clearly met.

Claim 7 is rejected under 35 U.S.C. § 103 as being unpatentable over Tajima in view of Sugata as applied to claims 1-5 above, and further in view of August. The patent of Tajima as modified, discloses all the claimed features of the invention with the exception of a connector comprising a hook portion and a hook engaging portion.

The patent of August in Figures 1 and 3 discloses a heat radiator comprised of a plurality of horizontally oriented, vertically extending heat radiating plates (40), where a plurality of heat pipes (18), disposed in a row, passes through the heat radiating plates (40) and a connector

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comprising a hook portion (25) and a hook engaging portion (26) for the purpose of compactly connecting together a plurality of heat pipe type cooling devices. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Tajima as modified, a connector comprising a hook portion and a hook engaging portion for the purpose of compactly connecting together a plurality of heat pipe type cooling devices as disclosed in August.

Response to Arguments

The devices of Tajima and Sugata are clearly heat pipes. In each reference, the fluid boils in the evaporator portion of the heat pipe, the vapor condenses in the upper portion of the heat pipe, and the condensed fluid returns to the evaporator portion of the heat pipe just as applicant's heat pipe.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Sugata, not Tajima, in the above rejection is relied upon to disclose sealed ends.

Conclusion

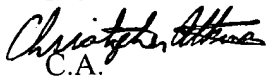
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Atkinson whose telephone number is (703) 308-2603.


C.A.

CHRISTOPHER ATKINSON
PRIMARY EXAMINER

August 2, 2000